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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 412,328	10 05 1999	YUICHI SATO	204552016500	9541

25227 7590 11 04 2002  
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EXAMINER

WILLE, DOUGLAS A

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 11 04 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/412,328

Applicant(s)

SATO, YUICHI

Examiner

Douglas A Wille

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Hu et al.
2. Applicant's admitted prior art, Figure 9, shows and SRAM comprised of CMOS devices Hu et al. show a DTMOS device (see Figure 7 and column 1, line 8 et seq.) that has the n-well deeper than the p-well and that can be used in CMOS circuitry for the advantages shown (column 2, line 46). It would have been obvious to modify the basic device to include the DTMOS device shown by Hu et al. for the advantages shown. Note that the gates of the devices are connected to a power supply and therefore, so are the channel forming regions.
3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Hu et al. and further in view of Tsui et al.
4. Tsui et al. show the use of dual thickness gate oxides with thinner gate oxides used for low voltage devices (column 1, line 14). Since DTMOS devices use lower voltages it would have been obvious to use thinner oxides for the lower voltage devices and to use normal gate oxides for other devices.
5. Claims 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Hu et al. and further in view of Hodges et al.
6. Hodges et al shows the formation of peripheral circuits for a memory device that use MOS structures (see page 368 and 369) and it would be obvious to use the DTMOS devices for these structures for the advantages shown.

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7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Hu et al. and further in view of Hodges.

8. Hodges shows a SRAM which uses resistors as an alternative SRAM to that shown in Applicant's admitted prior art and it would be obvious to use that circuit as a design choice and to use the DTMOS devices for the advantages shown.

***Response to Arguments***

9. Applicant's arguments filed 8/29/02 have been fully considered but they are not persuasive.

10. Applicant states that Hu et al. do not show that a DTMOS can be used in a SRAM device but the prior art shows an SRAM device with CMOS and Hu et al. shows that DTMOS can be used in CMOS and advantages are shown by Hu et al. It would therefore be obvious to use the DTMOS in the SRAM since it is a CMOS device and the advantages shown would be realized.

11. Applicant states that claims 2 and 4 show additional features that are not shown in the quoted art and then states that there is no teaching of using the DTMOS for specific transistors in the SRAM but the teaching of Hu et al. can be applied to any of the transistors of the SRAM and the features of claim 4 are shown by Hu et al.

12. Applicant states that there is no reason to combine the teaching of Tsui et al. but Tsui et al. show the use of thinner oxides for low voltage devices and since DTMOS are low voltage devices, thinner oxides would be obvious.

13. Applicant states that there is no reason to combine Hodges et al. with the other art but Hodges et al. show the peripheral circuitry and the teaching of Hu et al. is applicable to that circuitry also, for the same reasons.

*Conclusion*

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas A Wille whose telephone number is (703) 308-4949. The examiner can normally be reached on M-F (6:15-3:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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A handwritten signature in black ink, appearing to read "Douglas A. Wille".

Douglas A. Wille  
Patent Examiner

October 28, 2002